

Title (en)

Steam turbine and hydrophilic coating material used therefor

Title (de)

Dampfturbine und eine dazu benutzten Beschichtung aus hydrophilen Material

Title (fr)

Turbine à vapeur et couche de matériaux hydrophile utilisée pour celle-ci

Publication

**EP 1780379 A3 20090701 (EN)**

Application

**EP 06022506 A 20061027**

Priority

JP 2005317609 A 20051031

Abstract (en)

[origin: EP1780379A2] A steam turbine includes a bucket implanted in a turbine rotor and a nozzle disposed on an upstream side of the bucket and supported by a turbine casing, in which a plurality of stages, each including the bucket and the nozzle, are arranged axially in the turbine so as to define a steam path. A hydrophilic coating portion is disposed in the entire area or an area of at least one portion of a circumferential surface of the turbine rotor, surfaces of the nozzles, surfaces of the buckets, and an inner circumferential surface of the turbine casing.

IPC 8 full level

**F01D 5/28** (2006.01); **C03C 17/23** (2006.01); **C03C 17/25** (2006.01); **C09K 3/18** (2006.01); **F01D 9/02** (2006.01); **F01D 25/24** (2006.01)

CPC (source: EP US)

**F01D 5/284** (2013.01 - EP US); **F01D 5/288** (2013.01 - EP US); **F01D 25/002** (2013.01 - EP US); **F05D 2220/31** (2013.01 - EP US); **F05D 2230/90** (2013.01 - EP US); **F05D 2260/95** (2013.01 - EP US); **F05D 2300/50** (2013.01 - EP US); **F05D 2300/51** (2013.01 - EP US); **F05D 2300/60** (2013.01 - EP US); **Y02T 50/60** (2013.01 - EP US)

Citation (search report)

- [XYI] SU 1507991 A1 19890915 - KOMSOMOL NA AMURE POLT I [SU]
- [XYI] SU 615240 A1 19780715 - MO AVIATIONNYJ I IM S ORDZHON [SU]
- [XI] EP 1447208 A2 20040818 - GEN ELECTRIC [US]
- [YD] JP H0742506 A 19950210 - HITACHI LTD
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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**EP 1780379 A2 20070502**; **EP 1780379 A3 20090701**; **EP 1780379 B1 20111207**; **EP 1780379 B2 20200325**; AU 2006233225 A1 20070517; AU 2009217388 A1 20091015; AU 2009217388 B2 20120816; CN 1971001 A 20070530; CN 1971001 B 20110615; JP 2007120478 A 20070517; JP 4886271 B2 20120229; US 2007101719 A1 20070510; US 8132414 B2 20120313

DOCDB simple family (application)

**EP 06022506 A 20061027**; AU 2006233225 A 20061027; AU 2009217388 A 20090918; CN 200610168921 A 20061031; JP 2005317609 A 20051031; US 58841606 A 20061027